

Attorney Docket #: 24347-054US

**Section 2, Amendment to Claims:**

Please amend claims 1 and 10 as follows below. No claims are cancelled. The claims in the case remains claims 1 – 11, and the status of each is indicated.

1. (Currently Amended) A passenger safety interface circuit between a current source or a resistive-type seat sensor and a microprocessor airbag safety system controller

comprising:

a current mirror circuit having first and second current paths,

a seat [belt latch] sensor circuit comprising a current source or resistive-type seat, belt latch or belt tensioner sensor in said second current path and having a single lead interface to said current mirror circuit,

a current sensing circuit in said first current path, said first current in said first current path mirroring the current in said second current path, [and]

a control microprocessor circuit responsive to the current in said first current path for controlling the activation of a passenger safety system[.]; and

said interface circuit interfaces with both current source and resistive-type sensors, operates with low input voltage, permits use of an entire dynamic range of microprocessor analog input and interfaces with multiple safety sensors.

2. (Original) The passenger safety interface circuit as set forth in Claim 1 wherein said current mirror circuit includes first and second matching transistors, said first transistor included in said first current path and said second transistor included in said second current path.

3. (Original) The passenger safety interface circuit as set forth in Claim 2 further including a control transistor coupled between said second matching transistor and said seatbelt latch sensor for controlling the current to said seatbelt latch sensor circuit in response to a signal from said control microprocessor circuit.

4. (Original) The passenger safety interface circuit as set forth in Claim 3 further including a first current sense resistor in said first current path between the first matching transistor and ground potential, the voltage across said resistor being proportional to the current through said

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4 seatbelt latch sensor circuit and providing the input signal to the control microprocessor circuit.

1 5. (Original) The passenger safety interface circuit as set forth in Claim 4 wherein said control  
2 microprocessor circuit includes outputs to control the operation of a vehicle airbag system and/or  
3 a vehicle seatbelt tensioner system.

1 6. (Original) The passenger safety interface circuit as set forth in Claim 5 further including at  
2 least a second seatbelt sensor circuit in parallel connection to said first mentioned seatbelt latch  
3 sensor circuit, and at least a second control transistor coupled between said second matching  
4 transistor and said second seatbelt latch sensor circuit for controlling the current through said  
5 second seatbelt latch sensor circuit in response to a signal from said control microprocessor  
6 circuit.

1 7. (Original) The passenger safety interface circuit as set forth in Claim 6 wherein the current in  
2 said first current path mirrors the current in the second current path, said second current path  
3 including the current in said first seatbelt latch sensor circuit and at least said second seatbelt  
4 latch sensor circuit.

1 8. (Original) The passenger safety interface circuit as set forth in Claim 7 wherein the current  
2 through said first current path is detected by said control microprocessor circuit in discrete  
3 values, said discrete values indicating that neither seatbelt is latched, only said first seatbelt is  
4 latched, only a second seatbelt is latched, or that both seatbelts are latched.

1 9.(Original) A method of monitoring the status of passenger vehicle seatbelt latches comprising:  
2 providing a current mirror circuit with first and second current paths,  
3 controlling the current flow in said second current path by a control microprocessor  
4 circuit,  
5 monitoring the status of the seatbelt latches by providing a seatbelt latch sensor circuit,  
6 measuring the current in said first current path, said current in said first current path  
7 mirroring the current flow in said second current path,  
8 applying the measured current to the control microprocessor circuit to provide the status

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9 of the seatbelt latches to the microprocessor circuit, and  
10 providing an output path from said microprocessor circuit to a vehicle airbag system  
11 and/or a vehicle seatbelt tensioner system to fire or not to fire depending on the status of the  
12 seatbelt latches in the event of a detected collision or sudden deceleration.

1 10. (Currently Amended) A method of monitoring the status of passenger seat[belt latches]  
2 sensors comprising:

3 providing a current mirror circuit with first and second current paths between a current  
4 source or a resistive-type seat sensor and a microprocessor airbag safety system controller.  
5 said passenger seat sensors [belt latches] being included in the second current path,  
6 mirroring the current in said second current path in said first current path,  
7 measuring the current in said first current path,  
8 applying the measured current to a control microprocessor circuit, and  
9 controlling the activation of a vehicle airbag system and/or a vehicle seatbelt tensioner  
10 system to enable or disable firing depending on the status of the seat sensors [belt latches] in the  
11 event of a detected collision or sudden deceleration.

1 11. (Original) The method as set forth in claim 10 further including the step of:  
2 providing at least a second passenger seatbelt latch connected in parallel in said second  
3 current path; and wherein:  
4 said step of measuring the current in said first current path includes activating the  
5 corresponding control transistor to allow current flow through the selected seatbelt latch sensor.

**End of Section 2, Amendment to the Claims.**